

# TOUR OPERATORS PROGRAM OF SAFETY, INC. (TOPS)

## PROGRAM OF SAFETY

Adopted January 16, 1996  
Revised Feb 13, 1998  
Revised Jun 17, 2000  
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Revised Feb 28, 2007

### PREAMBLE:

Helicopter sightseeing tours must be among the safest type of flying. The objective of our industry is to provide access to our Nation's magnificent scenery for enjoyment and expansion of awareness while in the care of safe and professional operators.

### MISSION STATEMENT:

The goal of the TOPS organization is to ensure that the helicopter tour industry achieves a zero-accident rate through the establishment of and commitment to rigorous voluntary standards.

### DEFINITIONS:

*AIR TOUR - Any sightseeing or photo flight sold as a scenic tour for pleasure.*

*ENROUTE - That segment of flight, not under ATC control or under any Letter of Agreement to, from, and between specific scenic areas.*

*AIR TOUR OPERATOR - Any person or organization that conducts an air tour.*

*CREW - All personnel affecting the safety of the flight.*

*MANAGEMENT - All personnel responsible for establishing policy and/or having operational control regarding the conduct of air tours.*

*OVER WATER - Any segment of a tour that is beyond engine-out gliding distance to a suitable landing site on land.*

*SUITABLE LANDING SITE: - One in which there is a high probability of a successful landing.*

## I. MANAGEMENT

All safety related issues begin with management's attitude toward safety. TOPS was founded with, and has continued to emphasize the objective of maximum cooperation and open communication among the members. The TOPS websites provide a highly effective and economical method of communicating within the TOPS community; management is urged to encourage their employees to make frequent use of the TOPS websites. Within all TOPS activities, members will refrain from any competition with other members, and will fully comply with all anti-trust laws. Management will recognize the absolute importance of participation in and active support of TOPS Committees.

- A. Management shall establish and enforce the highest possible tour standards, which will include the following:
- 1) Prevailing visibility in the scenic area must be three (3) nautical miles or more. Minimum of one (1) nautical mile visibility is authorized for transitory situations where airspeed is limited to eighty (80) knots.
  - 2) Minimum enroute altitude of five hundred (500) feet AGL, except for ridgeline transitions or other legally required altitudes.
  - 3) Angle of bank not more than thirty (30) degrees.
  - 4) Angle of pitch not more than ten (10) degrees.
  - 5) All of the above standards shall include smooth transitions into each flight maneuver or flight profile. Management shall establish standards that would avoid any perception of a thrill ride, aerobatics, nap of the earth flying, or other unnecessary abrupt maneuvers.

- B. Management shall establish a safety management program, which satisfies the requirements of the TOPS safety audit checklist and includes an accident response plan.

In addition, Management shall appoint a Safety Officer who will obtain outside training. This will include training from safety management schools offering basic and advanced safety programs such as HAI's Safety Management, Advanced Safety Management, and Pilot Human Factors. If an outside Safety Officer is used as the Safety Officer, there must be an in-house safety designee. The Safety Program, the safety contractor and the safety contract must be approved by TOPS and shall not endure for more than one year without additional approval by TOPS.

- C. The audit system is at the heart of the TOPS Program of Safety, and

Management must be familiar with the audit process. The Board approves each auditor, based on integrity, reputation, personal attributes and professional qualifications and experience in aviation safety.

- 1.) Subsequent to the initial independent audit required for initial membership, independent audits shall be performed annually. The “Annual Audit” procedures are described in Section VII within the Program of Safety.
  - 2.) The audit process will be comprised of two parts, (A) and (B). Part (A) will consist of the traditional evaluation as established by TOPS membership. Part (B) will consist of an in-depth consultative evaluation by the auditor and presented to the subject operator. All tour sites of the audited operator will be evaluated; all audit costs will be paid for by the audited operator.
- D. It is the responsibility of management to establish clear operating standards, effectively communicate them to the pilot staff, and provide consistent day-to-day interpretation. Pilots are expected to comply with these standards, but shall never compromise safety when unforeseen or unusual circumstances occur. The pilot’s professional judgment will be respected at all times within these guidelines.
- E. Sometimes there is conflict between noise abatement and safe practice. The company shall maintain safety as the primary standard by which all air tours are conducted.
- F. Management shall implement a human factors program in order to develop and maintain a culture of safety throughout the organization. The objective of this program is increased safety performance in all departments.
- G. Sightseeing flights should not conduct operations within the height/velocity curve; except when necessary for landings, takeoffs, and approaches to and departures from in-ground-effect hover. It shall be a company policy, and included in pilot training, to recognize and avoid the height/velocity curve area for the type aircraft flown.
- H. Management will endeavor to hire instrument-rated pilots and encourage non-rated pilots to acquire their instrument rating.
- I. Management shall coordinate their air tour operations with other operators flying in the same air space. Operator meetings with TOPS members and other tour operators shall be held at least annually in order to coordinate routes, position reporting, noise, safety procedures, and other items as appropriate.

- J. Operating statistics are required to be reported annually.
- K. In the event that a member company has an accident, potential tour accident, or incident that company will notify within 24 hours, via e-mail, the TOPS Chairman, with a copy to the TOPS Executive Director, the date of the accident/near accident, or incident, type aircraft, location, whether or not there were injuries/fatalities among the passengers and/or crew, and extent of damage to aircraft (minor, major, total, etc.)

## II. PILOT QUALIFICATIONS

- A. The minimum pilot-in-command (PIC) flight qualifications are:
  - 1.) One thousand (1,000) hours helicopter PIC.
  - 2.) One hundred (100) hours of flying in typical terrain for which the pilot is going to be hired, or completion of a training program specifically designed for those unique conditions. This training will be recorded in the training record for each respective pilot.
  - 3.) Company checkout in make and model including ground and flight training.
- B. Verification shall be made of applicant pilot's certificate, flight time, and current appropriate medical certificate. Inquiry shall be made to obtain applicant's accident history, certificate action, and safety performance.
- C. The employer shall require a pilot applicant to provide a Federal Aviation Administration (FAA) abstract of his/her certificate record, and drivers license record. A license abstract can be obtained from the FAA at the following address:

FAA  
Airman Certification Branch  
P.O. Box 25082  
Oklahoma City, Oklahoma 73125-4940

## III. TRAINING

It shall be emphasized to each pilot during his/her training period and on a regular basis, that flying the public for pleasure tours must be the highest calling with regard to safety, attention to detail, compliance with Federal Air Regulations (FAR), and company standards. It is the pilot's responsibility to follow all established procedures. Training must emphasize that pilots comply with the utmost standard of professionalism and report to management any violations of

the TOPS Program or any perceived dangerous operations.

- A. All air tour pilots will be trained as a minimum under the current FAA 135 flight training standards. Additional training will include:
  - 1.) Inadvertent Instrument Meteorological Conditions (IMC) avoidance and recovery training to include:
    - a. Recognition & avoidance of IMC conditions.
    - b. Basic attitude flight training under the hood for:
      - 1. Recovery from unusual attitudes.
      - 2. Demonstration of 180 degree turns with a decent and a climb.
    - c. Local area procedures for inadvertent IMC.
  - 2.) Performance planning to include:
    - a. Density altitude conditions that are anticipated to be encountered in the operational profile.
    - b. Hover in-ground effect.
    - c. Hover out-of-ground effect.
  - 3.) Loss of effective anti-torque thrust.
  - 4.) Emphasized training in:
    - a. Pre-flight procedures.
    - b. Availability and proper use of cockpit checklists.
    - c. Use of the flight manual.
    - d. Basic helicopter aerodynamics to include:
      - 1. Settling with power.
      - 2. Ground resonance.
      - 3. Dynamic rollover.
      - 4. Low speed flight.
      - 5. Autorotation characteristics (annual touchdown

autorotation is highly recommended).

e. Recognition and avoidance of the height/velocity curve.

5.) Human factors:

a. Aeronautical Decision Making (ADM).

b. Crew Resource Management (CRM).

6.) Emergency egress and survival techniques.

7.) On board passenger briefing.

B. In addition to the required training listed above, each company shall establish a regular program that includes monthly/weekly refreshers and daily briefings.

C. All training referenced in item III above shall be documented and kept in appropriate training folders. These documents shall be made available to the auditor.

#### IV. MAINTENANCE

All members are required to meet the maintenance standards of FAR Part 135. Maintenance shall be conducted on a higher standard so as to achieve the highest possible degree of safety.

In order to increase pride in workmanship and promote safety and increased airworthiness, the following is required:

##### A. Technician Qualifications

1.) Technicians shall be A&P licensed mechanics with at least three (3) years experience in helicopter maintenance or have completed a factory training school for the make and model aircraft to be serviced. There shall be no more than one (1) helper for each mechanic employed. Ramp attendants, refuelers, and aircraft detailers shall not be considered mechanics helpers.

2.) Verification shall be made of technician's A&P certificate and past experience. The employer shall require a mechanic applicant to provide **an** FAA abstract of his/her certificate record and auto license record.

##### B. Technical Training

1.) All operators shall establish a training schedule that provides for at least eight (8) hours of technical training per year.

- 2.) The technical department leader and/or supervisors shall attend a factory training course no less than once every three (3) years.
- 3.) Training records shall be kept and readily available for verification during audits. An appropriate training syllabus shall be maintained for each type of training given.
- 4.) Management is encouraged to send technical department members to Heli-Expo to attend training courses: such as, Safety Management, Aviation Quality Management Programs, Internal Evaluation and Voluntary Disclosure Programs, and Helicopter Maintenance Management.
- 5.) Operators are encouraged to utilize the FAA "Maintenance Technician Awards Program" and the HAI Safety Awards Program to build enthusiasm within their organizations and to achieve continually higher awards as outlined in the program.

C. Technical Department Standards

- 1.) The technical department shall have a factory trained employee for each model of helicopter being maintained.
- 2.) All subscribers to this program will utilize the Maintenance Malfunction Information Reporting (MMIR) process on a regular basis.
- 3.) The first-line maintenance supervisor will coordinate with the Safety Officer to ensure implementation of the safety program.

D. Technical Library

The technical department shall maintain and make available to all maintenance personnel a current technical library including, but not limited to:

- 1.) Appropriate manuals for aircraft operated.
- 2.) FAR's.
- 3.) TC Data Sheets.
- 4.) AD's.
- 5.) Material Safety Data Sheets (MSDS).

- 6.) Alert service bulletins issued by the manufacturers.

E. Maintenance Contracting

Operators that contract out their maintenance shall require the contractor(s) to follow the TOPS standards. The contractor(s) will be audited by the TOPS auditor to ensure compliance.

V. GROUND SUPPORT PERSONNEL AND PROCEDURES

Ground personnel are an important part of the crew and provide an essential contribution to the overall safety of the tour operation.

All ground support activities shall be systematically monitored by the Safety Officer. Open lines of communication shall be established and maintained to allow prompt and assured reporting of hazardous situations and submission of ideas and suggestions concerning safety.

A. Flightline

- 1.) Qualified personnel shall brief passengers from an established checklist prior to passengers entering the immediate helicopter activity area.
- 2.) Qualified personnel shall escort all passengers to the helicopter while maintaining continuous control of passengers' movements.
- 3.) Qualified personnel shall assist passengers with loading, seat belt fastening, and **will provide** any specific information relative to the aircraft and flight routine.
- 4.) Qualified personnel shall monitor and assist movement of the helicopter in congested areas or as appropriate.
- 5.) Qualified personnel shall assist passengers upon landing by opening the helicopter door, deplaning, and escorting the passengers from the helicopter activity area.
- 6.) Walkways shall be clearly identified where permitted and appropriate.

B. Training For Ground Support Personnel

Training shall be established and documented to ensure understanding and compliance with the following minimum procedures:

- 1.) Helicopter safety and awareness both inside and outside the cabin.
- 2.) Passenger briefing.
- 3.) Loading and unloading passengers.
- 4.) Ground guiding and communication with the pilot when appropriate.
- 5.) Fueling procedures.
- 6.) Load manifest.
- 7.) Emergency procedures in case of ramp mishap.
- 8.) Records of this training shall be kept in appropriate training folders.

C. Dispatch

- 1.) Two-way radio communication shall be maintained when practical.
- 2.) Flight following shall be required.
- 3.) Emergency notification procedures shall be the responsibility of flight following personnel.
- 4.) Overdue aircraft reaction procedures shall be established and tested on an annual basis.

VI. AIRCRAFT EQUIPMENT

- A. All air tour aircraft shall be equipped and operated with appropriate instrumentation to recover from Inadvertent Meteorological Conditions (IMC). The installed equipment shall meet, at a minimum, FAR Part 135.159 night VFR instrumentation standards.
- B. All air tour aircraft shall be equipped with an Emergency Locator Transmitter (ELT). It is recommended that operators consider GPS integrated ELT's.
- C. Any aircraft flying over water without a suitable land-based landing area shall be amphibious or equipped with flotation equipment to accomplish a safe emergency water landing. In addition, each passenger and pilot shall wear an approved personal flotation device.
  - 1) All air tour aircraft operating in the State of Hawaii are required to be amphibious or equipped with flotation equipment to accomplish safe

emergency water landing regardless of the company's intention for the aircraft to fly over water. In addition, each passenger and pilot shall wear an approved personal flotation device.

- D. Visibility of tour aircraft is essential for assured avoidance of collisions. Aircraft will be required to have the following anti-collision equipment installed:
- 1.) Alternating avoidance lights.
  - 2.) High-visibility rotor blades.
  - 3.) Minimum of one strobe light.
  - 4.) All air tour aircraft operating in the State of Nevada performing Commercial Air Tour Operations over the "Las Vegas Strip" at night are required to be equipped with High Intensity Anti Collision Lights affixed to each the Vertical and Horizontal Stabilizers on the aircraft.

The above anti-collision equipment shall be used at all times except when the pilot-in-command deems it inappropriate for safety reasons.

## VII. ANNUAL REGIONAL AUDIT

An Annual Regional Audit will be conducted each year for each "Regular Member" of the Tour Operators Program of Safety. The Chairman of the Audit/Membership Committee will provide oversight for this process using the following guidelines:

- A. Three TOPS Auditors will be utilized for the Annual Regional Audits. On a rotating basis, the fourth TOPS Auditor will be utilized for "Special Project" as directed by the Chairman of the Audit/Membership Committee.
- B. The Chairman of the Audit/Membership Committee will assign each of the Three TOPS Auditors a specific Region to Audit. These assignments will rotate so no individual Auditor will Audit a specific region more that once every four years. These assignments will be made no later than April 1<sup>st</sup> of the given year.
- C. Each Auditor will coordinate his schedule with each Regular Member to accommodate a convenient schedule for both the Auditor and Operator being audited. Each Auditor should use "reasonable" efforts to establish an audit schedule that will allow those operators in a specific region the opportunity to share in common expensed for transportation, lodging, and meals.

- D. Auditors will conduct the Regional Audits in a timely manner so that the Chairman of the Audit/Membership Committee can receive the completed audit results no later than September 30<sup>th</sup> of the given year.
- 1) All discrepancies that arise during an audit must be corrected by the Member Operator and approved by the assigned Auditor. The Audit/Membership Committee will not serve as an Arbitrator between the Member Operator and the Auditor. If a question of compliance cannot be resolved during the audit process, a petition to the TOPS Board of Directors can be made at the discretion of either the Member Operator or the assigned Auditor. The Board will then provide a clarification as to the issue of dispute as it pertains to the specific requirements outlined in the Program of Safety.
  - 2) Any Regular Member not passing an Annual Regional Audit by September 30<sup>th</sup> of the given years, without an approved extension by the TOPS Board of Directors, will be deemed "Out of Compliance" with the terms of membership of the Program of Safety and their membership will be terminated.
- E. Any Regular Member can request an early Annual Regional Audit by following the below procedures:
- 1) A written request with rationale for the request is submitted to the Chairman of the Audit/Membership Committee,
  - 2) The requested Audit cannot be conducted within six (6) months of any previous TOPS Audit,
  - 3) The Auditor assigned is the same Auditor that would be assigned to the specific region in which the requesting Regular Member is based.
- F. All completed audit reports are considered to be proprietary, and distribution is limited to the auditor, operator, the Audit/Membership Committee, the Executive Director and the Board. No further copies are to be made or distributed. Upon completion of audit actions, (i.e., approval by the Board, or removal of the operator as a TOPS member), all copies of the audit, both "hard" and electronic are to be destroyed except for one hard copy which will be given to the operator for his use & disposition.

#### VIII: NEW APPLICANT PROCESS FOR REGULAR MEMBERS

- A. TOPS Executive Director discusses TOPS program requirements with applicants and assesses their ability to meet those requirements within six months from the date the prospect receives a TOPS membership

application package.

- B. In coordination with the Chairman of the Audit/Membership Committee, the Executive Director will notify all Regular TOPS members of the potential applicant via e-mail. This is an opportunity for members to provide information, ask questions or express concerns regarding the new applicant.
- C. Executive Director receives the application and verifies that requirements are met in full including payment of 50% of annual dues.
- D. Chairman of the Audit/Membership Committee assigns a mentor to assist in the application process and prepare for the initial audit.
- E. Once the mentor determines that the applicant is ready for their audit, the Chairman of the Audit/Membership Committee will scheduled the applicants' initial audit.
- F. Initial audit results will be sent via e-mail to the Chairman the Audit/Membership Committee with copy sent to Executive Director within 30 days of scheduled audit.
- G. The Audit/Membership Committee reviews audit report and makes recommendation to the Board for approval or corrections. If membership is not recommended, Chairman of the Audit/Membership Committee works with mentor, auditor, Executive Director and applicant to resolve deficiencies in a timely manner if feasible. If corrections are not completed within the allotted time, Executive Director will notify Chairman of the Audit/Membership Committee and TOPS Chairman.
- H. The Board approves or denies membership. Executive Director prepares a letter for signature of TOPS Chairman, informing the applicant of the decision of the Board. In the event membership is not approved, the unsuccessful applicant will not receive a refund of application payment.

IX. REVISIONS TO THE TOPS PROGRAM OF SAFETY

All revisions to the TOPS Program of Safety must be approved by majority vote of the TOPS regular membership, and verified by signature of the TOPS Secretary.

Attested and certified a true and correct copy of the revised Tour Operators Program of Safety this 28th day of February, 2007.

(CORPORATE SEAL)

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Secretary